

ABSTRACT

5 An apparatus for separating solid particles from the suction effluent of, for
example, a dental office, preferably driven by a dental office vacuum pump,
includes a surge tank for accommodating effluent overflow connected to a
sedimentary deposit tank for sedimentation of effluent particles. A bypass conduit
is connected to the surge tank inlet which is equipped with a vacuum break valve
for allowing air into the system when the suction openings are closed. The
10 sedimentary deposit tank has a series of baffle chambers through which effluent
flows in sequence, and in each of which chambers sediment is deposited for later
removal. The surge tank preferably has a liquid level sensor and warning device.
Modular filters or adsorbants may be installed in the sedimentary deposit tank, or
a modular auxiliary filter may be connected downstream of the tank. Chemical
15 injection may be used to improve sedimentation. A positive air pressure source or
auxiliary pumps may be used to drive the effluent, particularly in large installations
incorporating multiple surge and deposit tanks. Full tank effluent removal and
drying facilities are optionally provided.